

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF THE PATENT APPEALS AND INTERFERENCES**

In re application of

Alexander Conrad, et al.

Serial No. 08/421,810

Examiner: E. Holloway III

Filed April 13, 1995

Group Art Unit: 2211

Entitled: INTELLIGENT LOCATOR SYSTEM

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Pittsburgh, Pennsylvania 15219  
July 16, 2001

Hon. Assistant Commissioner of Patents  
Box Patent Appeal  
Washington, DC 20231

Sir:

**REPLY BRIEF**

Appellants respectfully submits their response to arguments in the Examiner's Answer for the appeal in the above-identified patent application.

In the last paragraph appearing on page 13 and continued to page 14 of the Examiner's Answer, the statement is made that "How can applicants' specification support each receiver storing multiple identity data streams when storing only one identity data for only one receiver is described in applicants' disclosure at col.12 lines 36-50". It is assumed that the reference to applicant's disclosure is found in applicants' parent issued patent no. 5,426,425. The argument views applicants' disclosure wholly out of context and seizes upon a detailed description to one skilled in the art of how the system processes one signal from one badge, but

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that is not to say that the system responds to only one badge in a room. The Boards attention is respectfully directed to:

A system user will be able to input a request to the intelligent locator computer 2 terminal and/or generate a report of the present location of any person, animal, or equipment which is wearing an intelligent locator transmitter badge 18 including movement of the badge with the person, animal, or equipment over any previous time period.

Referring now to the block diagram of Figure 2, there is illustrated, in block form the preferred embodiment of the intelligent locator system for use in a specific application of a computer controlled hospital nurse call system, preferably a Wescom System 3000 (TM). The nurse call system includes a nurse call CPU 26 having an input device 26A such as a key board. The CPU 26 fulfills the function of a central computer controlling the nurse call system that also includes one or more nurse-call central control terminals 22<sub>1</sub>, 22<sub>2</sub>, - - - 22<sub>32</sub> each connected to communicate over a standard RS-232 bus 24 with the nurse call CPU 26. Terminals 22<sub>1</sub>, 22<sub>2</sub>, - - - 22<sub>32</sub> are each connected by a parallel data bus 28 to communicate with patient room stations 32 dispersed about a local area of the facility such as a floor of a hospital. The nurse call CPU 26 is coupled by an ethernet high speed serial data bus 20 using standard tcp/ip protocol with the intelligent locator computer 2. When operating with a nurse-call system, the intelligent locator system of the present invention replaces automatic or manual locators that are normally found with such a system. When nurses wearing the intelligent locator transmitter badges enter a patient's room in response to a call, the intelligent locator system automatically detects their presence and communicates that information to the nurse-call system and thereby eliminates the need for the nurses to manually register their presence. Emphasis added. (Applicants specification Page 12, line 1 through Page 13, line 4)

The Boards attention is also respectfully directed to the following:

An important feature of the present invention is the coding for transmission and decoding of received pulse bursts at diverse times during predetermined time intervals to define a unique binary identification code for the operation of the locating and monitoring system. To facilitate an understanding of the underlying principle of the present invention, reference is now made to the diagram of Figure 3 wherein there is illustrated timing diagrams in graphical form of three simultaneous infrared transmissions by three separate intelligent locator transmitters over a four second period. It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined

by an algorithm. As shown in Figure 3, for illustrative purposes only, when the code bursts 40 of all three badges happen to line up at the same time of 0 second thus interfere with one another as depicted at the far left of Figure 3, then during the next second all three pulses and any two of the pulses will not simultaneously occur or line up in time because the pulses emitted by their respective transmitters occur in time according to a different code determined by when the pulse transmission occurred during the preceding second. In this way, multiple badges carried into the same room of a facility can be distinguished from one another by their infrared pulse transmissions as detected by the receiver. Moreover, the infrared transmission by only one such transmitter can be uniquely identified from all other infrared pulse transmissions whether from other badge transmitters or sources of infrared pulse transmissions occurring within the facility. In this regard it is to be noted that infrared pulse transmissions may be emitted by equipment or devices carried by persons within the facility. Thus, the present invention is intended to enable unique identification of any given badge with respect to other badges and sources of infrared transmissions. Emphasis added (Page 14, line 1 through Page 15, line 10)

The Board is respectfully requested to consider the foregoing in addition to claim chart and applicants' arguments set forth on pages 16-30 of their Brief to clearly demonstrate compliance with 35 USC 112, first paragraph. It is therefore believed this application is in condition for the declaration of an Interference.

The examiners answer acknowledges in the paragraph spanning pages 17 and 18 that "Mufti discloses transmitting at random intervals in col. 8 line 1---" and then argues the random does not mean random by an interpretation that "since all the transmitter functions in Mufti are proved by the microcontroller (61) which operates on algorithms, then the random interval is a variation of the response interval making the microcontroller equivalent to applicant's means responsive to an algorithm to control varying of the interval." The Mufti disclosure cannot be rewritten to support an argument. The Boards attention is respectfully directed to the enclosed dictionary description of the term "random". The same argument is advanced in the Examiner's Answer concerning "the random pulse generator" of the Hanier reference.

In conclusion, it is respectfully submitted that the Examiner's rejections under 35 USC 112 and 103 should be reversed for the reasons given above and as set forth in Appellants' Brief.

Respectfully submitted,

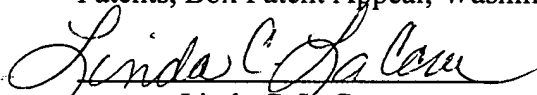


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#### MAIL CERTIFICATION

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Linda C. LaCone

Date: July 16, 2001

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**rampage** \ˈrɑmp-əj\ *n.*: a course of violent, riotous, or reckless action or behavior — **rampageous** \ˈrɑmp-ə-jəs\ *adj.* — **rampageously** *adv.* — **rampageousness** *n.*

**rampant** \ˈrɑmp-ənt\ *adj.* [ME, fr. MF, prp. of *rampier*] *n.*: the quality or state of being rampant

**1 a**: rearing upon the hind legs with forelegs extended **b**: standing on one hind foot with one foreleg raised above the other and the head in profile — used of a heraldic animal **2 a**: marked by a menacing wildness, extravagance, or absence of restraint **b**: WIDESPREAD **3**: having one impost or abutment higher than the other (a ~ arch) — **rampant-ly** *adv.*

**rampart** \ˈrɑmp-ərt, -pɑrt\ *n.* [MF] **1**: a broad embankment raised as a fortification and usu. surmounted by a parapet **2**: a protective barrier: BULWARK **3**: a wall-like ridge (as of rock fragments, earth, or debris)

**rampike** \ˈrɑp-ik\ *n.* [origin unknown]: an erect broken or dead tree. **rampion** \ˈrɑmp-ən\ *n.* [prob. modif. of MF *raponce*, fr. OIt *raponzol*]: a European bellflower (*Campanula rapunculus*) with a tuberous root used with the leaves in salad

**ramprod** \ˈrɑmp-rəd\ *n.* **1**: a rod for ramming home the charge in a muzzle-loading firearm **2**: a cleaning rod for small arms

**ramrod** *adj.*: marked by rigidity, severity, or stiffness

**ramshackle** \ˈrɑm-shak-əl\ *adj.* [alter. of earlier *ransackled*, fr. pp. of obs. *ransack*, freq. of *ransack*] **1**: appearing ready to collapse: RICKETY **2**: carelessly or loosely constructed

**rams-horn** \ˈrɑmz-hɔrn\ *n.*: a snail (genus *Planorbis*) often used as an aquarium scavenger

**ram-til** \ˈrɑm-tɪl, -tɪl\ *n.* [Hindi *rāmtīl*, fr. Skt *Rāma* Rama + *tila* sesame]: a tropical composite herb (*Guizotia abyssinica*) cultivated in India for its oil seeds

**ramus** \ˈrɑ-məs\ *n.* *pl.* **ram-i** \-mɪ\ [NL, fr. L, branch — more at RAMIFY]: a projecting part, elongated process, or branch: as **a**: the posterior more or less vertical part on each side of the lower jaw that articulates with the skull **b**: a branch of a nerve

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**ranch** \ˈrɑnch\ *n.* [MexSp *ranchito* small ranch, fr. Sp, camp, hut & Sp dial., small farm, fr. OSp *ranchearse* to take up quarters, fr. MF (se) *ranger* to take up a position, fr. *ranger* to set in a row — more at RANGE] **1**: a large farm for raising horses, beef cattle, or sheep **2**: a farm or area devoted to a particular specialty **3**: RANCHHOUSE

**2 ranch** *vi.*: to live or work on a ranch ~ *vt.* **1**: to work as a rancher on **2**: to raise on a ranch

**rancher** \ˈrɑn-cher\ *n.*: one who owns or works on a ranch

**ranche-ro** \ˈrɑn-cher-ə(-l), -rən-\ *n.* *pl.* **-ros** [MexSp, fr. *ranchito*] *n.*: RANCHER

**ranch house** *n.*: a one-story house typically with a low-pitched roof and an open plan

**ranch-man** \ˈrɑnch-mən\ *n.*: RANCHER

**ran-cho** \ˈrɑn-(ch)hō, -rən-\ *n.* *pl.* **ranchos** [MexSp, small ranch] *n.*: RANCH

**ran-cid** \ˈrɑn(t)-sɪd\ *adj.* [L, *rancidus*, fr. *rancēre* to be rancid] **1**: having a rank smell or taste **2**: OFFENSIVE. *syn* see MALODOROUS — **ran-cid-ity** \ˈrɑn-sɪd-ə-ti\ *n.* — **ran-cid-ness** \ˈrɑn(t)-sɪd-nəs\ *n.*

**ran-cor** \ˈrɑnj-kər, -kō(-)r\ *n.* [ME *rancour*, fr. MF *rancour*, fr. LL *rancor* rancidity, *rancor*, fr. L *rancēre*]: bitter deep-seated ill will *syn* see ENMITY

**ran-cor-ous** \ˈrɑnj-k(ə)-rəs\ *adj.*: marked by rancor — **ran-cor-ous-ly** *adv.*

**ran-cour** *Brit var of RANCOR*

**rand** \ˈrænd, -rænd, -rān\ *n.* *pl.* **rand** [the Rand, So. Africa] — see MONEY table

**R & B** *abbr* rhythm and blues

**R & D** *abbr* research and development

**ran-dom** \ˈrændəm\ *n.* [ME, impetuosity, fr. MF *randon*, fr. OF, fr. *randir* to run, of Gmc origin; akin to OHG *rinnan* to run — more at RUN]: a haphazard course — **at random**: without definite aim, direction, rule, or method

**2 random** *adj.* **1**: lacking a definite plan, purpose, or pattern **2 a**: relating to, having, or being elements or events with definite probability of occurrence (~ processes) **b**: being or relating to a set or to an element of a set each of whose elements has equal probability of occurrence (a ~ sample); also: characterized by procedures designed to obtain such sets or elements (~ sampling) — **ran-dom-ly** *adv.* — **ran-dom-ness** *n.*

*syn* RANDOM, HAPHAZARD, CASUAL, DESULTORY *shared meaning* **element**: determined by accident rather than design

**3 random** *adv.*: in a random manner

**random-access** *adj.*: permitting access to stored data in any order the user desires (a ~ computer memory)

**ran-dom-iza-tion** \ˈrænd-ə-mə-zā-shən\ *n.*: arrangement (as of samples or experimental treatments) so as to simulate a chance distribution, reduce interference by irrelevant variables, and yield unbiased statistical data

**ran-dom-ize** \ˈrænd-ə-mīz\ *vt.* **-ized**; **-izing**: to use randomization on — **ran-dom-iz-er** *n.*

**randomized block** *n.*: an experimental design (as in horticulture) in which different treatments are distributed in random order in a block or plot — called also *randomized block design*

**random variable** *n.*: a variable that is itself a function of the result of a statistical experiment in which each outcome has a definite probability of occurrence (the number of spots showing if two dice are thrown is a ~) — called also *variate*

**random walk** *n.*: a process (as Brownian movement or genetic drift) consisting of a sequence of steps (as movements or changes in gene frequency) each of whose characteristics (as magnitude and direction) is determined by chance

**R and R** *abbr* rest and recreation: rest and recuperation

**randy** \ˈrænd-ē\ *adj.* [prob. fr. obs. *rand* (to rant)] **1** chiefly *Scot*: having a coarse manner **2**: LUSTFUL, LECHEROUS

**2 randy** *n.* *pl.* **rand-ies** chiefly *Scot*: a scolding or dissolute woman

**rang past of RING**

**range** \ˈræŋj\ *n.* often *attrib* [ME, row of persons, fr. OF *rengier* to range] **1 a** (1): a series of things in a line: row (3) ships in a U.S. public-land survey that are numbered east and west from the principal meridian of the survey **b**: an aggregate of individuals in one order **c**: a direction line **2**: a cooking stove that has an oven and a flat top with burners or heating elements **3 a**: a place that may be ranged over **b**: an open region one which livestock may roam and feed **c**: the region throughout which a kind of organism or ecological community naturally lives or occurs **4**: the act of ranging about **5 a** (1): the horizontal distance to which a projectile can be propelled (2): the horizontal distance between a weapon and target **b**: the maximum distance a vehicle can travel without refueling **c**: a place where shooting or golf driving is practiced **6 a**: the space or extent included, covered, or used: SCOPE **b**: the extent of pitch covered by a melody or lying within the capacity of a voice or instrument **7 a**: a sequence, series, or scale between limits (a wide ~ of patterns) **b**: the limits of a series: the distance or extent between possible extremes **c**: the difference between the least and greatest values of an attribute or of the variable of a frequency distribution **8 a**: the set of values a function may take on **b**: the class of admissible values of a variable **9**: LINE 11

**2 range** *vb* **ranged**; **rang-ing** [ME *rengen*, fr. MF *ranger*, fr. OF *rengier*, fr. *renc*, *reng* line, place, row — more at RANK] *vi.* **1 a**: to set in a row or in the proper order **b**: to place among others in a position or situation **c**: to assign to a category: CLASSIFY **2 a**: to rove over or through **b**: to sail or pass along **3**: to arrange (an anchor cable) on deck **4**: to graze (livestock) on a range **5**: to determine or give the elevation necessary for (a gun) to propel a projectile to a given distance ~ *vi.* **1 a**: to roam at large or freely **b**: to move over an area so as to explore it **2**: to take a position **3 a**: to correspond in direction or line: ALIGN **b**: to extend in a particular direction **4**: to have range **5**: to change or differ within limits **6 of an organism**: to live or occur in or be native to a region *syn* see LINE

**range finder** *n.* **1**: an instrument used in gunnery to determine the distance of a target **2**: TACHYMETER **3**: a device for measuring the distance between a camera and an object

**range-land** \ˈræŋj-land\ *n.*: land used or suitable for range

**range paralysis** *n.*: an avian leukosis involving flaccid paralysis esp. of the legs and wings of maturing chickens

**ranger** \ˈræŋ-jər\ *n.* **1 a**: the keeper of a British royal park or forest **b**: FOREST RANGER **2**: one that ranges **3 a**: one of a body of organized armed men who range over a region esp. to enforce the law **b**: a soldier specially trained in close-range fighting and in raiding tactics

**rangy** \ˈræŋ-jē\ *adj.* **rang-i-er**; **-est** **1**: able to range for considerable distances **2 a**: long-limbed and long-bodied (~ cattle) **b**: being tall and slender **3**: having room for ranging **4**: having great scope — **rang-i-ness** *n.*

**ra-ni** or **ra-nee** \ˈrɑ-nē, -rən-\ *n.* [Hindi *rānī*, fr. Skt *rājñī*, fem. of *rājān* king — more at ROYAL]: a Hindu queen: a rajah's wife

**ra-nid** \ˈrɑn-əd, -rā-nəd\ *n.* [deriv. of L *rana* frog]: any of a large family (Ranidae) of frogs distinguished by slightly dilated transverse sacral processes

**rank** \ˈræŋk\ *adj.* [ME, fr. OE *ranc* overbearing, strong; akin to OE *riht* right — more at RIGHT] **1**: luxuriantly or excessively vigorous in growth **2**: offensively gross or coarse: FOUL **3** *obs*: grown too large **4 a**: shockingly conspicuous (must lecture him on his ~ dissoluteness — David Walden) **b**: COMPLETE — used as an intensive (~ beginners) **5** *archaic*: LUSTFUL, RUTHLESS **6**: offensive in odor or flavor: esp.: RANCID **7**: PUTRID, FETTERING **8**: high in amount: EXCESSIVE *syn* see MALODOROUS, FLAGRANT — **rank-ly** *adv.* — **rank-ness** *n.*

**2 rank** *n.* [ME *renc*, *reng*, of Gmc origin; akin to OHG *hring* ring — more at RING] **1 a**: ROW, SERIES **b**: a row of people **c** (1): a line of soldiers ranged side by side in close order (2) *pl*: ARMED FORCES (3) *pl*: the body of enlisted men **d**: any of the rows of squares that extend across a chessboard perpendicular to the file **e** *Brit*: STAND **6**: **2**: an orderly arrangement: FORMATION **3**: a social class **4 a**: relative standing or position **b**: a degree or position of dignity, eminence, or excellence: DISTINCTION (soon took ~ as a leading attorney — J. D. Hicks) **c**: high social position (the privileges of ~) **d**: a grade of official standing **5**: the order according to some statistical characteristic (as score on a test) **6**: any of a series of classes of coal based on increasing alteration of the parent vegetable matter, increasing carbon content, and increasing fuel value **7**: the number of linearly independent rows in a matrix

**3 rank** *vt.* **1**: to arrange in lines or in a regular formation **2**: to determine the relative position of: RATE **3**: to take precedence of ~ *vi.* **1**: to form or move in ranks **2**: to take or have a position in relation to others

**rank and file** *n.* **1**: the enlisted men of an armed force **2**: the individuals who constitute the body of an organization, society, or nation as distinguished from the leaders — **rank and file** \ˈbrɑn-kən\ *n.*

**rank correlation** *n.*: a measure of correlation depending on rank

**rank-er** \ˈræŋ-kər\ *n.*: one who serves or has served in the ranks: esp.: a commissioned officer promoted from the ranks

**Rank-ine** \ˈræŋ-kən\ *adj.* [William J. M. Rankine 1817-1872 Sc engineer & physicist]: being, according to, or relating to an absolute temperature scale on which the unit of measurement equals a Fahrenheit degree and on which the freezing point of water is 491.69° and the boiling point 671.69°

**rank-ing** *adj.*: having a high position: as **a**: FOREMOST (~ poet) **b**: being next to the chairman in seniority (~ committee member)

**ran-klē** \ˈræŋ-kəl\ *vb* **ran-kled**; **ran-kl-ing** \-k(ə)-liŋ\ [ME *ranclen* to fester, fr. MF *rancler*, fr. OF *draunceler*, *rancler*, fr. *drauncle*, *drauncle* festering sore, fr. ML *dracuncululus*, fr. L, dim. of *draco* serpent — more at DRAGON] *vi.* **1**: to cause anger, irritation, or deep bitterness **2**: to feel anger and irritation ~ *vt.*: to cause irritation or bitterness in